UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,009	03/10/2004	Seiji Tanizawa	TANIZAWA1	2661

1444 7590 09/16/2005

BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER	
MASINICK, MICHAEL D	
ART UNIT	**PAPER NUMBER**
2125	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/796,009	TANIZAWA ET AL.	
	Examiner	Art Unit	
	Michael D. Masinick	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 3-8 are pending in this application.

Response to Arguments

1. Applicant's arguments filed 8/25/2005 have been fully considered but they are not fully persuasive. Amendments related to the previous USC 112 problems have been considered and are found to be persuasive. All previous USC 112 rejections are removed.

2. With regard to USC 103 rejections, applicant's arguments are not found to be persuasive. Applicant argues with regard to claims 3 and 5 that the Nixon patent does not show "inputting the name of a step in the operation of a molding machine" or "displaying step names in the operation of an injection molding machine". Examiner notes previously cited columns 33 and 34 as well as figures 23 A and B. Specifically, figures 23 A and B clearly show the process a user goes through in creating a step ("block") in the manufacturing process. It is clear in figure 23 B that you must name the step when it is created. Furthermore, figure 23 A shows a created block with a name above the block (A1).

3. Applicant argues with regard to claims 4 and 7, that the Nixon patent does not show "selectively displaying one of: an active display screen for displaying connection states of said contacts and coils along with operations of the injection molding machine in real time and a still display screen displaying the connection states of said contacts and coils at a certain point in time in operation of the injection molding machine." Examiner disagrees with applicant's interpretation of the claim language and submits that it is only necessary to contain one of the claim elements in order to read upon this claim. If the applicant is seeking claim coverage for

both screens, the claim language should be changed to "preparing two screens" and then "selectively displaying one of the prepared screens" or some other similar language which clarifies the intentions of the claim. Examiner maintains that the previously cited section of Nixon (Column 34, lines 39-42) shows "a still display screen displaying the connection states of said contacts and coils at a certain point in time".

4. Rejection for amended claim 6 has been added and the reasoning behind the rejection of claim 8 is changed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,801,942 to Nixon et al in view of U.S. Patent No. 6,272,398 to Osborne et al.

2. Referring to claims 3, Nixon shows a sequence circuit display method having contacts and coils for controlling operation, said method comprising selectively inputting an operating step name from an input device (Column 9, lines 13-32); displaying a sequence circuit as a ladder diagram on a display device; and selectively inputting one of the contacts and coils in said ladder diagram, the displayed sequence circuit including contacts and coils corresponding to the selectively inputted one of the contacts and coils as the ladder diagram on the display device, wherein said display of contacts and coils of said ladder diagram in said display device

comprises displaying step names in the operation (Column 33, line 52 – Column 34, lines 26). Nixon shows a selection of modules in Figures 23 A-D.

3. Nixon does not show that these steps are specifically done corresponding to an injection molding machine.

4. Osborne shows a programmable system for creating programs for injection molding machines. Osborne is only used as a reference to show that PLC programming systems and display devices are known in the art of injection molding and are commonly used.

5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the device programming and display method of Nixon to view the ladder logic and sequence circuit programs for injection molding machines because "high level languages are not usually used or understood by process engineers, maintenance engineers, control engineers, operators and supervisors" and the simplicity of the ladder logic viewing system allows these people a "graphical view of the elements of the process control system that enables them to view the system in terms relevant to their responsibilities." Furthermore, Nixon shows "Process control systems have widespread application in the automation of industrial processes such as the processes used in chemical, petroleum, and manufacturing industries, for example." Column 2 of Nixon shows the full use of this system and the ways in which process control devices are used in the industry.

6. Referring specifically to claims 5, Nixon shows wherein said display of contacts, coils, etc. of said ladder diagram in said display device comprises displaying operating step names in the injection molding machine (Figure 23B).

7. Referring to claim 4 and 7, Nixon shows wherein said display of contacts, coils, etc. of said ladder diagram in said display device comprises selectively displaying one of: an active display screen for displaying connection states of said contacts, coils, etc. along with operations of the injection molding machine in real time and a still display screen displaying the connection states of said contacts, coils, etc. at a certain point of time in operation of the injection molding machine ("The Ladder Logic program 2270 supports ladder logic simulation, historical data collection and mode, alarm and status report generation" – Column 34, lines 39-42).

8. Referring to claim 6, Nixon shows displaying the selected coil or contact and displaying the other coils or contacts differently. This term is very vague and can be read upon simply by the fact that the name of each coil or contact is displayed in the "block". Thus, every block is displayed differently.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over "Circuit Monitor Function Unit (SFC Monitor) by Toyoda Machine Works Ltd (Hereafter "Toyoda") in view of U.S. Patent No. 6,272,398 to Osborne et al.

10. Referring specifically to claim 8, Toyoda shows a sequence circuit display method comprising: displaying a sequence circuit as a ladder diagram on a display device, wherein by a contact selection instruction and coil search instruction for the contact in the ladder diagram being given, a sequence circuit including coils corresponding to the contact is displayed as a ladder diagram on the display device, or wherein by a coil selection instruction and contact search instruction for the coil in the ladder diagram being given, a sequence circuit including

contacts corresponding to the coil is displayed as a ladder diagram on the display device (Section 3.2.2.2 through section 3.2.4). Examiner notes that because of Japanese language pack issues, the true PDF document could not be printed and came up with many pages blank. The HTML file was printed as well in order to obtain the text of the document and is included with the document as well.

11. Toyoda does not show that this system is to be used with an injection molding machine.

12. Osborne shows a programmable system for creating programs for injection molding machines. Osborne is only used as a reference to show that PLC programming systems and display devices are known in the art of injection molding and are commonly used.

13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the sequence display search functions of Toyoda with an injection machine because ladder design and control systems are well known in the process control arts to provide a simple programming interface. The Toyoda system is designed with industrial process control in mind in many shapes, of which injection molding is one.

14. Examiner further notes that it would have been obvious to one of ordinary skill in the art to reverse the search and display functionality with regard to the coil and contact system in place in Toyoda. If you can search for coils and display related contacts, it is obvious to search for contacts and display related coils.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MDM

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100